The Impact of Visitor Satisfaction on Soundscape Design in Buddhist Temples – A Case Study of the Square around Taiping Xingguo Temple Pagoda*

[1]Minting Zhao, Eakachat Joneurairatana, Veerawat Sirivesmas and Sone Simatrang
Silpakorn University, Thailand.
[1]Corresponding Author's Email: zhao_m@silpakorn.edu

Abstract

This study investigates how visitor satisfaction affects soundscape design and practice in Buddhist temples, with a focus on the square of Taiping Xingguo Temple as a case. This study uses a mixed method to collect and analyze soundscape data, categorizing the soundscape into natural sound, Buddhist sound, human sound, and noise. The objectives of this study are delineated as follows: 1. To record and analyze the sound sources surrounding Taiping Xingguo Temple Pagoda. 2. To evaluate the influence of soundscape elements on visitor satisfaction at Taiping Xingguo Temple Pagoda. 3. To conceptualize a soundscape design for Taiping Xingguo Temple Pagoda that may serve as a model for other temples.

The results of this study reveal that: 1. The soundscape elements consist of four types and most respondents find the traffic noise to be excessively loud. The soundscape of Taiping Xingguo Temple ought to facilitate meditation and relaxation, convey Buddhist teachings and culture, enhance faith and identity, and augment the soundscape's richness. 2. The elements of the soundscape significantly impact visitor satisfaction. Sounds emanating from Buddhist rituals and the natural environment exert the most substantial positive effect, whereas auditory disturbances negatively affect satisfaction to a considerable degree. This research advocates for augmenting the presence of Buddhist and natural sounds, coupled with the attenuation of noise, to enhance visitors' perceptions. 3. The design of the soundscape should be strategically focused on reinforcing the temple's spiritual ambiance. This entails maintaining and honoring its historical and cultural integrity, accentuating its Buddhist essence, establishing balance and cohesion among the various sound sources, and customizing the soundscape's intensity and rhythm to the spatial functions and the exigencies of the tourists.

Keywords: Soundscape Design; Buddhist Temple; Tourist Satisfaction; Soundscape Optimization

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Introduction

Buddhist temples embody the essence of Buddhist culture, and their visual environments reflect the spirituality and aesthetics inherent in Buddhism. The graphical backdrop of Buddhist temples encompasses various aspects, such as history, culture, layout, architecture, and gardens, garnering significant academic interest. Yet, in contrast to the visual environment, the soundscape environment of Buddhist temples-comprising both sound and auditory perception-often receives less attention and warrants more systematic study. The soundscape is a vital component of the temple's religious atmosphere, influencing not only the spatial ambiance and cultural connotations but also visitor satisfaction and experience. Current research on the Buddhist soundscape predominantly concentrates on the architectural soundscape, namely the measurement and evaluation of sound parameters and acoustic effects within the temples. While these studies offer foundational insights for the optimization of the temples' acoustic environments, they do not fully capture the soundscape's characteristics and value. Consequently, investigating the status quo and challenges, for the soundscape environment of Buddhist temples from a comprehensive soundscape design perspective presents a meaningful and formidable research endeavor.

In 2014, the International Organization for Standardization (ISO) issued the ISO 12913-1 standard, defining soundscape as "the acoustic environment as perceived or experienced and/or understood by a person or people, in context" (ISO, 2014). Research on soundscapes focuses internationally on natural soundscapes, which are considered a natural resource that must be protected and restored. Concurrently, soundscape research aims to enhance the quality of the urban acoustic environment through the control of acoustic parameters. In China, soundscape research integrates local cultural elements, particularly the design concepts of classical garden culture, thus forming the distinctive characteristics of Chinese soundscape research. This research draws upon the wisdom of ancient Chinese culture, as reflected in old poems, literature, and painting, and is more poetic and emotional compared to the scientific objectivity of Western soundscape research. The concept of soundscape yields different artistic effects across various countries and social contexts. Despite the cultural complexity, many research methods can be shared and adapted. For instance, Chinese scholar Li Guoqi initiated a soundscape observation research project in 2001, laying the groundwork for the development of soundscape research in China (Li, 2001). In recent years, Chinese scholars have fused science with traditional Chinese culture and art, applying soundscape theory to analyze and evaluate the comfort, preference, and subjective-objective correlation of Buddhist temples' soundscapes, thus providing a valuable reference for the construction of soundscapes in Chinese Buddhist temples.

In summary, due to cultural complexity, the concept of soundscape exhibits different artistic effects across various countries and social contexts. Therefore, an in-depth exploration of soundscape research not only facilitates an understanding of sound expression in diverse

cultures and locales but also offers a significant direction for the application and optimization of soundscapes in different regions. Soundscape theory introduces the notion of soundscape quality, which encompasses the subjective perception and evaluation of sound by humans, including aspects of beauty, comfort, harmony, and suitability. This theory provides a robust theoretical framework and analytical tool for analyzing the soundscape environment of Buddhist temples, as well as guiding principles and reference standards for proposing a soundscape optimization design scheme. As unique spiritual landscapes, the soundscapes of Buddhist temples can convey Buddhist doctrines and rituals and reflect the history and culture of the region. Consequently, examining the impact of soundscapes on visitor satisfaction in Buddhist temples is of paramount importance for enhancing the cultural value of Buddhist temples, optimizing visitor experiences, and promoting the protection and development of these sacred spaces.

In recent years, scholars in related fields have explored the impact of soundscapes on the satisfaction of visitors to Buddhist temples. Luo Ying and Du Yi independently measured and evaluated the soundscapes of Qingcheng Mountain scenic area and Maijishan Grottoes, respectively, and found that physical factors such as sound level (Luo, Kang, and Zhang, 2014; Du, and Kang, 2019), proper pressure, and sound field uniformity, have a significant correlation with tourists' soundscape satisfaction. Zhang Dongxu conducted a questionnaire survey on the soundscape of Han Buddhist temples and discovered that psychological factors, such as sound preference and comfort, are significantly correlated with tourists' soundscape satisfaction (Zhang, Zhang, Liu, and Kang, 2018). Other studies have analyzed the impact of sound's social attributes on tourists' satisfaction, considering social factors such as the soundscape's cultural connotation, religious significance, and historical memory. For instance, Qiu Mengyuan, Wang Fang, and others studied the soundscape of the Nanjing Confucius Temple-Qinhuai Scenic Belt and determined that tourists' perception of the soundscape environment is contingent upon the physical characteristics of sound (Qiu, Wang, Sha, and Hou, 2013). The aspects of the soundscape environment influence tourists' satisfaction with the soundscape only when the physical attributes of sound fall within a certain range. Based on the above analysis, the impact of soundscapes on the satisfaction of Buddhist temples is a complex issue involving multiple dimensions such as physics, psychology, and culture, necessitating research and evaluation from various perspectives and levels.

In the study of the impact of the sound environment on the satisfaction of visitors to Buddhist temples, future research directions may include the following suggestions: 1. Research on Sound Aesthetics and Spiritual Perception: Current studies often focus excessively on noise interference within the sound environment and tend to overlook the research on sound aesthetics and spiritual perception. Future studies should place greater emphasis on how the sound environment can enhance the spiritual atmosphere of temples and the ways in which sound design can improve the spiritual experience of visitors. 2. Research on Specific

Design Optimization Cases: There is a dearth of specific design optimization cases in current research that demonstrate how the sound environment influences temple satisfaction. Future research should provide more concrete case studies, encompassing principles of sound environment design, implementation methods, and effect assessment, to offer practical guidance for the enhancement of temple sound environments. 3. Interdisciplinary Collaboration: Given that sound environment design is an interdisciplinary field, future research should foster collaboration among experts from diverse fields such as acoustics, architecture, psychology, and religious studies to explore the creation of a sound environment that can both mitigate noise interference and augment spiritual experiences. By implementing the above suggestions, it is anticipated that future research will more comprehensively assess the impact of the sound environment on the satisfaction of visitors to Buddhist temples and provide more specific and effective guidance for the optimization of temple sound environments. This will not only enhance the visitor experience but also contribute to the better protection and inheritance of Buddhist culture

The article delineates a four-step method for soundscape art design at Taiping Xingguo Temple. Initially, information is amassed through literature review and field research to analyze and construct a theoretical framework. 1. Information Collection: The soundscape is subsequently sampled and recorded using a survey questionnaire method, and the data is analyzed with SPSS software. 2. Survey and Analysis: The sound evaluation method is then employed, where sound samples are assessed based on the personal feelings of respondents. 3. Sound Evaluation: Finally, a soundscape design experiment is conducted, where sound selection and creation are informed by questionnaire results and stakeholder needs, and audience feedback is collected to refine the soundscape design. 4. Design Experiment: This research facilitates an understanding of the impact of the soundscape on visitor satisfaction and its application in the design of Buddhist temple squares.

Objectives of the research

1. To record and analyze the sound sources in the vicinity of Taiping Xingguo Temple Pagoda.

2. To examine the effects of soundscape elements on visitor satisfaction at Taiping Xingguo Temple Pagoda.

3. To develop a soundscape design for Taiping Xingguo Temple Pagoda that may serve as a model for other temples.

Research Methodology

The article employs Taiping Xingguo Temple as a case study to explore the methodologies and impacts of soundscape art design. Taiping Xingguo Temple, situated in Yuncheng City, Shanxi Province, China (Tian, 2017), is a Buddhist temple featuring a pagoda

originally constructed during the Tang Dynasty's Zhenguan era and subsequently rebuilt in the eighth year of the Song Dynasty's Jiayou era, boasting a history exceeding 1300 years. The temple and its adjacent square constitute vital elements of Yuncheng City's cultural heritage and serve as significant religious leisure sites for both tourists and residents. The square's soundscape is composed of four sound sources: natural sounds, Buddhist sounds, human sounds, and noise, which offer rich layers and diverse characteristics.

The study employed a four-step method, including:

1. Information Collection: Through literature review and field research, the study analyzed relevant knowledge and cases of Chinese Buddhist temples, soundscape art, Buddhist spiritual landscapes, and Taiping Xingguo Temple, constructing a theoretical framework. It also compared and summarized the soundscapes' characteristics and differences among various temples to provide references for subsequent design.

2. Survey Questionnaire Method: The soundscape of Taiping Xingguo Temple was sampled and recorded, categorizing sound samples into four types: natural sounds, Buddha sounds, human sounds, and noise. Thirty-five listeners (including 20 tourists, 13 residents, and two monks) were invited to participate in soundscape satisfaction interviews, observations, and questionnaire surveys. They listened to the sound samples and scored them based on their subjective feelings, obtaining feedback data on soundscape satisfaction and preferences. SPSS software was then used to analyze the data for correlations, providing data support for subsequent design and application.

3. Sound Evaluation Method: Given that numerous factors influence soundscape evaluation, besides quantitatively measuring the physical characteristics of sound, the subjective assessment of respondents is also essential. Soundscape evaluation is based on the personal feelings of respondents, involving the evaluation of 16 sound samples. According to the five-level scoring criteria in Table 2, respondents selected one of five evaluation scales: very satisfied, satisfied, neutral, dissatisfied, and very dissatisfied. They evaluated their satisfaction with the sound samples. To avoid the immediate impact of the environment, the study used recorded audio to evaluate in a quiet setting near Taiping Xingguo Temple. The evaluation results help us better understand the audience's needs for sound characteristics and their feelings towards soundscape aesthetics, thus guiding the design and application of sound.

4. Soundscape Design Experiment: In this instance, the soundscape design experiment was confined to the square area in front of Taiping Xingguo Temple's pagoda. Based on the site's function and stakeholder needs from the questionnaire survey results, the design involved the selection, combination, change, and creation of sound. To allow the audience to more intuitively feel the soundscape effect, the study generated several soundscape models and gathered audience feedback and opinions. Then, based on the respondents' feedback, the soundscape satisfaction levels were compared and analyzed pre- and post-

design to determine the final soundscape design scheme.

This research, grounded in soundscape theory, explores the impact of the soundscape on the satisfaction of visitors to Buddhist temples and how to optimize the soundscape design of the square in front of Taiping Xingguo Temple's pagoda. The soundscape encompasses the area's overall sound environment, first proposed by Finnish geographer Granö. In the 1960s, Canadian composer Schafer further developed the soundscape theory, considering sound to be an integral part of the environment and a crucial means by which humans perceive and evaluate their environment (Schafer, 1993). Soundscape studies divide the research subject into three aspects: the audience, the sound, and the environment. Unlike traditional acoustics research focusing on the physical properties of sound, soundscape research emphasizes the subjective perception and evaluation of the sound environment.

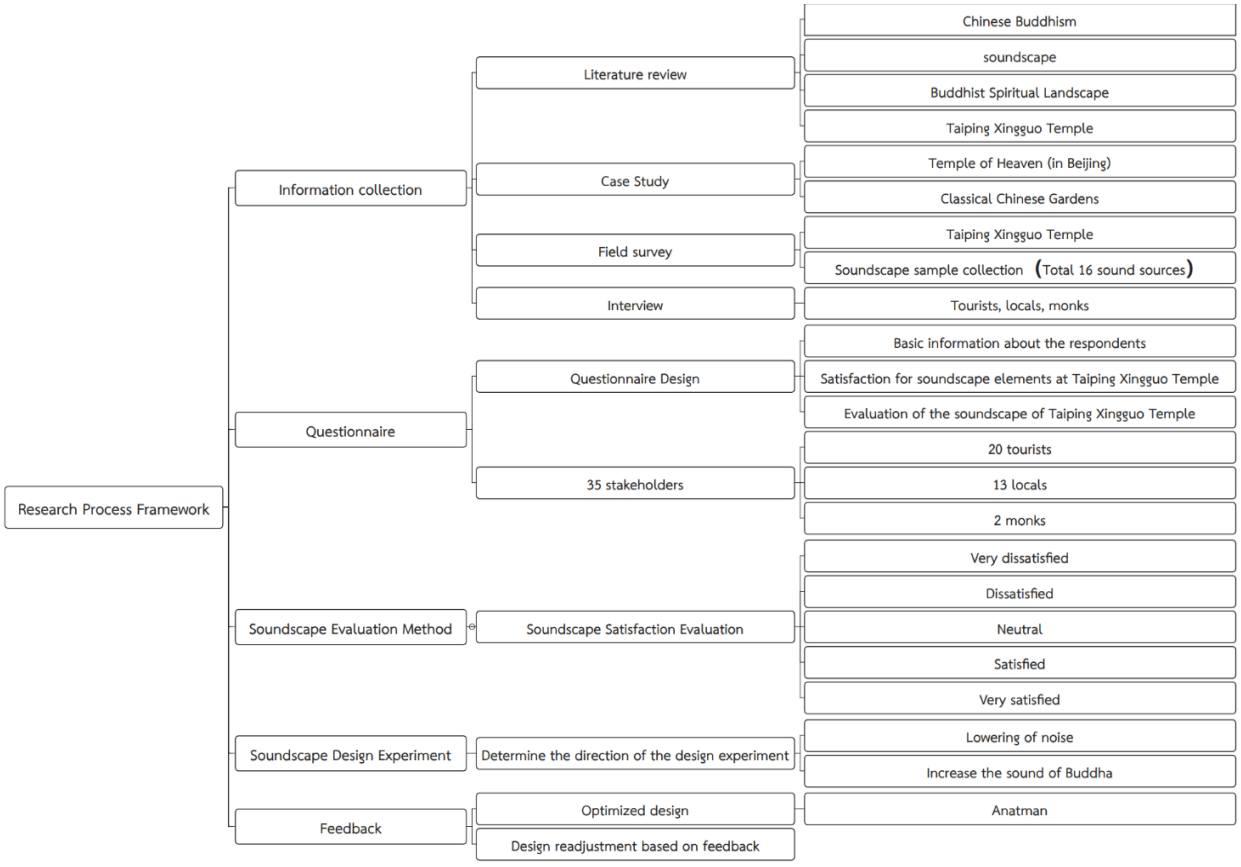

Figure 1: Research process framework

Table 1: 5-level evaluation standard of overall soundscape

Evaluating indicator	Evaluation Scale				
Satisfaction	Very satisfied	Satisfy	Generally	Not satisfied	Very dissatisfied
Score	2	1	0	-1	-2

Research Result

The 1st Objective is to record and analyze the various sound sources of Taiping Xingguo Temple to reveal their acoustic characteristics, soundscape functions, and cultural connotations. The research involved a random sampling of tourists, residents, and monks. The details of the interview information are presented in Table 2. A total of 35 questionnaires were distributed, and descriptive statistics and analysis were conducted on the questionnaire data. The main conclusions, as detailed in Table 3, are as follows: Respondents were least satisfied with noise, particularly traffic noise, with an average score of (-1.74), indicating a high level of dissatisfaction. Conversely, respondents were most satisfied with Buddhist music, with an average score of (1.71) for monk' bowls, signifying a high level of satisfaction, followed by chanting sutras, with an average score of (1.57). Among natural soundscapes, tourists expressed the highest satisfaction with bird calls, with an average score of (1.37). The survey results also indicate that (74%) of users believe the traffic noise in the square in front of the pagoda is excessively loud, impacting the tranquility and sanctity of the temple. Additionally, some tourists reported that the Buddhist music in the temple lacks diversity and layering, making it challenging to reflect the depth of Buddhist culture. Based on these research findings, this design experiment aims to reduce the interference of traffic noise within the temple through soundscape design, enrich the soundscape's depth and expressiveness, and enhance the temple's religious atmosphere.

Table 2: Basic visitor information

Variable	Categories
Gender	1–male; 2–female
Age	1: ＜30; 2:31-40; 3:41-50; 4:51-60; 5:＞60
Frequency of visits to temples	1-First time;2-Once a week;3-Two to five times a week;4-Once a month
Reasons for coming to the temple	1-Pray for blessings and wishes;2-Travel with your family;3-Group gathering;4-Others
Education level	1-High school and below;2-Bachelor;3-Master;4-PhD
Occupation	1-Government employee;2-Teacher;3-Company employee;4-Businessmen;5-Other jobs
Standard of a single sound evaluation	1-Very satisfied;2-Satisfy;3-Generally;4-Not satisfied;5-Very dissatisfied

Table 3: Sound source classification and satisfaction evaluation

Soundscape Category	Sound source	Evaluation Scale
Natural sounds	Wind	-0.06
	Water	0.71
	Bird	1.37
	Insect	-0.57
Buddhist sounds	Bell	1.09
	Drum	0.26
	Copper bell	1.31
	Monk bowl	1.71
	Buddhist instruments	0.74
	Chanting sutras	1.57
	Background music	0.54
Human sounds	Tourists pray	0.57
	Dialogue	-0.83
	Sound of hawking	-0.57
Noise	Transportation	-1.74
	Building Construction	-1.23

The 2nd Objective is to analyze tourists' perceptions of the soundscape and their satisfaction evaluations at Taiping Xingguo Temple through a questionnaire survey and design experiment, and to explore the influence of soundscape element classification on tourists' satisfaction. According to the research results, the square in front of Taiping Xingguo Temple Pagoda, as depicted in Figure 2, is a critical area planned and renovated by the Yuncheng City Government. The red area represents the temple tower, and the yellow area signifies the primary planning zone. The planning objectives include protecting the historical and cultural heritage of Taiping Xingguo Temple, enhancing the visitor experience, and promoting a Buddhist atmosphere conducive to harmonious community development.

To achieve these goals, this study proposes a targeted planning approach. The yellow area is designated as the primary planning zone, the red area as the temple tower, and the green area as the echo space. The echo wall employs acoustic principles and materials such as concrete to produce unique sound effects, thereby enhancing the temple's mystique and allure. It also embodies essential Buddhist teachings, such as emptiness and dependent

origination. The blue area is allocated for the historical exhibition hall. Its sloping roof, reminiscent of rolling mountains, creates a natural and harmonious landscape. The exhibition hall utilizes multimedia elements to present the history, architectural features, and cultural impact of Taiping Xingguo Temple, deepening visitors' understanding and appreciation of this historical and cultural landmark. It also serves as a platform for local residents to engage in learning and dialogue.

As illustrated in Figure 3, street trees are planted at the entrance to the square leading to Taiping Xingguo Temple to attract birds, resonating with the design theme of "sound transmission in the empty valley." This concept symbolizes the dissemination and legacy of sound, reflecting and extending the design of the echo wall situated in front of the tower. It positions the soundscape as a conduit between the community and the temple, bridging modernity with history, and the old with the new.

Figure 2 Design site status and planning drawings

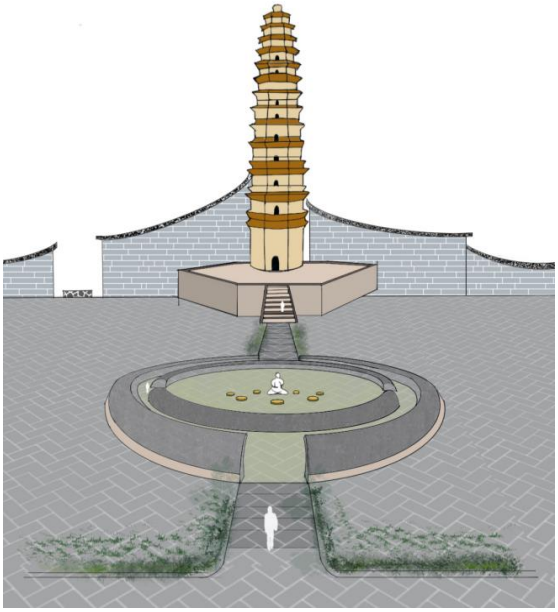

Figure 3: Planning diagram of the square in front of the tower of Taiping Xingguo Temple

The 3rd Objective is to apply soundscape art design to the design experiment of Taiping Xingguo Temple and to provide a paradigm reference for the soundscape design of other temples. The research findings indicate that Zen Buddhism posits that all living beings possess a Buddha nature and do not need to rely on external entities; by recognizing their true nature, they can attain Buddhahood. In line with this philosophy, Zen aesthetics encourages the abandonment of external adornment in favor of returning to one's true nature. "Empty nature" constitutes the ideological bedrock of Zen, with Zen practice being the journey towards "realizing emptiness."

This article constructs a layered soundscape based on field research to cultivate a progressive Zen experience, enabling individuals to incrementally discern the true nature of Buddhism as they enter the echo space. The design adheres to the following principles: minimizing traffic noise and amplifying the sounds of Buddha and birds. The article incorporates the Buddhist concept of the six realms of reincarnation, as illustrated in Figure 4. The "Zhong Agama Sutra" delineates the six realms of reincarnation as the cyclical existence of living beings through heaven, the asura realm, the human realm, the animal realm, the hungry ghost realm, and hell, all influenced by karma. The early Buddhist perspective on reincarnation also centered on the notion of "anatta" or "selflessness," with reincarnation being the outcome of interdependent origination. Buddhism regards reincarnation as the wellspring of suffering.

To liberate oneself from the cycle of reincarnation, it is imperative to eradicate afflictions such as greed, anger, and ignorance, attain pure nirvana, and realize the state of "Anatman." Aligning with the actual needs of the interviewees, street trees were planted along both sides of the square's entrance, complemented by evergreen shrubs to attract birds and mitigate noise. Concurrently, guided by Buddhist teachings, a dual-layer echo wall was implemented, as depicted in Figure 4. The echo space is segmented into three areas. The first area is the temple square's original external space, themed "The Great World," replete with traffic sounds, vocalizations, conversations, birdsong, and a cacophony of soundscape elements. The second area's soundscape theme is "Buddha's Sound," predicated on the recorded sounds of Buddhist instruments, such as monks' bowls, with the temple abbot's chanting during Buddhist ritual days as the primary sound, complemented by birdsong and other natural sounds as auxiliary elements. The "Diamond Sutra," a seminal text of Zen Buddhism, is inscribed on the wall to engender a sanctified ambiance. The primary function of the first echo wall layer is to attenuate noise and bolster the reverberation of internal Buddhist sounds, ensuring their continuity. The reverberations immerse visitors in the sound of Buddha, evoking the perpetual cycle of reincarnation. The journey through reincarnation culminates upon entering the third area, themed "Anatman." This meditative space is devoid of soundscape elements, furnished solely with seated Buddha statues and meditation cushions. The second echo wall layer occludes external Buddhist sounds and reflects the

footsteps within the space; in this domain, only footsteps and vocalizations are audible, ultimately leading to enlightenment and the realization of Anatman, as illustrated in Figure 5. The stark auditory contrast between these two realms imparts to visitors a sensory experience of reincarnation and nirvana, thereby provoking contemplation.

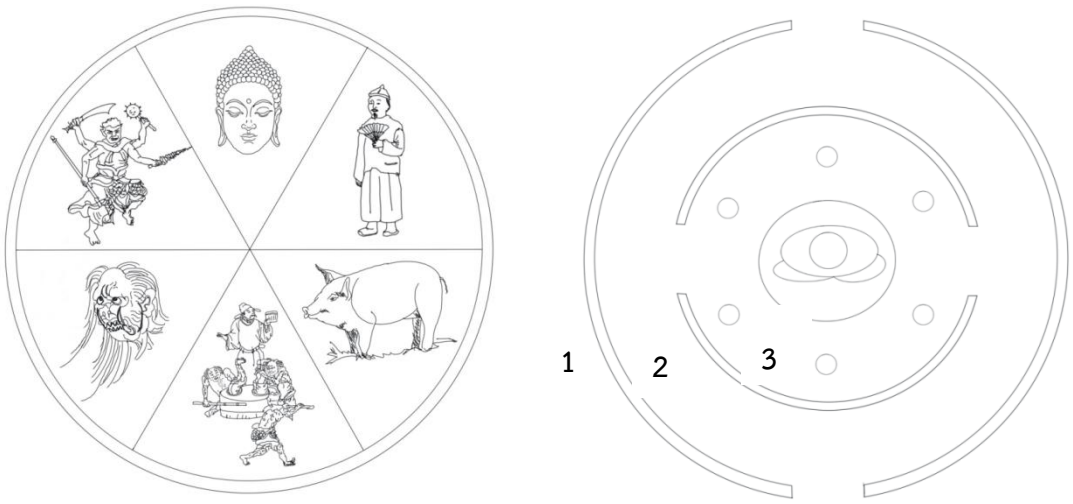

Figure 4: Schematic diagram of the six realms of reincarnation and echo space design diagram

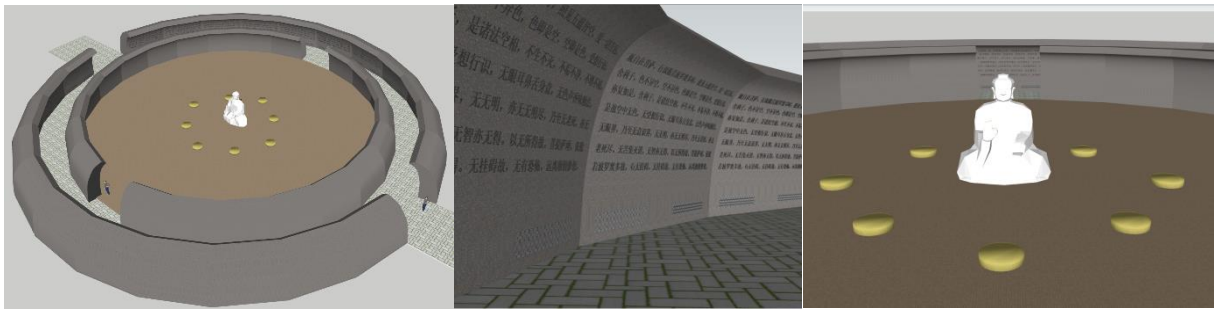

Figure 5: Three-layer echo space

Figure 6: Entity model

The New Body of Knowledge

The specific soundscape design plan can: 1. Assist soundscape designers in optimizing the soundscape of the target site based on this plan, providing examples and references for the soundscape design of other temples. 2. Aid in the protection and inheritance of temples, as well as in promoting the spirit and culture of Buddhism. 3. Apply to Buddhist sites, offering reference significance for other types of soundscape design, such as those in cities, cultural, historical, religious, and memorial contexts, thereby realizing the practical application of soundscape theory. As an integral component of soft design within landscape architecture, soundscape design can enhance or mitigate the audience's dissatisfaction with the original venue, thereby improving user satisfaction and experience.

Discussion of Research Results

From the research result of the 1st Objective, it was discovered that respondents were highly dissatisfied with noise, particularly traffic noise, and expressed great satisfaction with Buddhist music and natural sounds. They also indicated a desire for a more diverse and layered soundscape. This dissatisfaction with noise stems from its interference with the perception and appreciation of the acoustic properties, soundscape functions, and cultural connotations of various sound sources at Taiping Xingguo Temple. Conversely, Buddhist music and natural sounds were found to enhance these attributes. These findings align with the research conducted by Chinese scholar Zhang Dongxu on the soundscape of Han Buddhist temples (Zhang, Kong, Zhang, and Kang, 2022), which focused on exploring the characteristics and significance of their soundscape. The primary distinction between the two studies lies in the scope and sample selection; Zhang Dongxu's research is broader and includes soundscape planning suggestions for various types of temples (Zhang, Xiang, and Tao, 2017), whereas the current research is centered on the soundscape design experiment of Taiping Xingguo Temple.

From the research result of the 2nd Objective, the research revealed that tourists' perceptions and satisfaction evaluations of the soundscape at Taiping Xingguo Temple are influenced by the classification of soundscape elements. The proposed planning method has led to improvements in the acoustic environment and the overall tourist experience at the temple. The classification of soundscape elements facilitates the identification of sound sources, their functions, and their impact on the quality and diversity of the soundscape. The research methodology employed a blend of qualitative and quantitative approaches to gather and analyze data on the temple's soundscape, allowing for a more accurate reflection of its characteristics.

From the research results of the 3rd Objective, it was determined that the soundscape design experiment at Taiping Xingguo Temple will serve as a paradigmatic reference for the soundscape design of other temples. The innovative aspects of this case design include:

1. Zen Buddhism and Zen Aesthetics: Zen Buddhism posits that all living beings inherently possess Buddha nature and do not require external entities; by recognizing their true nature, they can achieve enlightenment. In accordance with this philosophy, Zen aesthetics promotes the abandonment of superficial adornment in favor of returning to authentic nature. “Empty nature” forms the ideological cornerstone of Zen, with Zen practice being the journey towards “realizing emptiness.”

2. Soundscape Design Based on Field Research: The article proposes a layered soundscape constructed from field research to facilitate a progressive Zen experience, enabling individuals to incrementally encounter the true essence of Buddhism upon entering the echo space. The design adheres to principles that prioritize reducing traffic noise and enhancing the presence of Buddha chants and birdsong.

3. Buddhist Concept of Six Realms of Reincarnation: The article integrates the Buddhist concept of the six realms of reincarnation, as depicted in Figure 4. The “Zhong Agama Sutra” describes these realms as the cyclical existence of beings through heaven, the asura realm, the human realm, the animal realm, the hungry ghost realm, and hell, all governed by karma. The early Buddhist interpretation of reincarnation also emphasized the principle of “anatta” or “selflessness,” with reincarnation being the consequence of interdependent causation. Buddhism regards reincarnation as the root of suffering. To transcend the cycle of reincarnation, one must overcome afflictions such as greed, anger, and ignorance, attain pure nirvana, and realize the state of “Anatman.”

4. Echo Wall Design Inspired by Buddhist Teachings: Addressing the specific needs of the interviewees, the design incorporates street trees along the square’s entrance roads, complemented by evergreen shrubs to attract birds and reduce noise. Informed by Buddhist teachings, a dual-layer echo wall was conceived, as illustrated in Figure 4. The echo space is segmented into three zones: the first zone represents the temple square’s original external area, themed “The Great World”; the second zone corresponds to the internal space within the first echo wall layer, themed “Sound of Buddha”; the third zone is the innermost space within the second echo wall layer, themed “Anatman.” The pronounced auditory contrast between these zones is designed to evoke sensations of reincarnation and nirvana, stimulating contemplation among visitors.

This approach aligns with the principles of soundscape theory, which similarly acknowledges the cultural and historical context of the sound environment. The distinction lies in the focus of this research on the specific case design of Taiping Xingguo Temple, whereas soundscape theory offers a broader application across various sound environments. This research introduces an innovative two-tier echo wall design inspired by the Buddhist concepts of the six realms of reincarnation and “Anatman,” a specificity not present in general soundscape theory. The design primarily assesses the acoustic environment from the visitors’

perspective, while soundscape theory encompasses the viewpoints of residents, sound sources, and sound designers as well.

Conclusion

The soundscape of Taiping Xingguo Temple comprises four elements, with traffic noise being overly loud, as noted by most respondents. The soundscape should support meditation, relaxation, Buddhist teachings, cultural identity, and enhance overall richness. Visitor satisfaction is highly influenced by the soundscape, where Buddhist rituals and natural sounds contribute positively, while noise disruptions detract significantly. This study recommends increasing Buddhist and natural sounds while reducing noise to improve visitor experiences. Soundscape design should prioritize the temple's spiritual ambiance, preserving historical and cultural integrity, emphasizing Buddhist essence, balancing sound sources, and aligning intensity and rhythm with spatial and visitor needs.

Suggestions

From the results of the research, the researcher has the suggestions as follows:

1. The suggestions from the research

From the research result of the 1st objective, it was found that in the soundscape environment of Taiping Xingguo Temple, Buddhist sounds and natural sounds positively impact tourist satisfaction, while noise damages tourist satisfaction. (Liu et al., 2017) Therefore, the related institute should apply as follows: Government communities should increase Buddhist sounds and natural sounds, such as playing chanting sounds in temples, planting more plants around temples, attracting more birds to create realistic sounds, and reducing noise.

From the research result of the 2nd objective, it was found that soundscape elements significantly affected visitor satisfaction. Therefore, the related institute should apply as follows: Temples should regularly collect and analyze tourists' evaluations of the temple's soundscape, continuously optimize the temple's soundscape design, and improve tourist satisfaction.

From the research result of the 3rd objective, it was found that the soundscape design plan aims to coordinate various sound sources, enhance the temple's religious atmosphere and cultural connotation, and improve visitor satisfaction. Therefore, the related institute should apply as follows: Designers should use soundscape monitoring and evaluation methods to analyze tourists' soundscape feedback, promptly identify design deficiencies, and continuously optimize to improve the effectiveness and applicability of soundscape design solutions.

2. The suggestions for future research

The future research should involve the following issues:

2.1 Expand the sample size and scope of the research, such as conducting more questionnaires and interviews with more tourists under different conditions of time, season, and festival, to improve the representativeness and universality of the research.

2.2 Enrich the soundscape evaluation indicators and research methods and improve the comprehensiveness and diversity of research.

2.3 Deepen the research on soundscape design theory and practice, learn from and cross-fertilize other fields, and conduct simulation and other methods to improve the innovation and applicability of research.

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